Treatment of Mushroom Amanitin Poisoning

TO THE EDITOR: We have three comments on the excellent paper by Pond and co-workers on mushroom amanitin poisoning in the August issue.[1]

Biliary recirculation of amanitin toxins was treated by duodenal tube and by activated charcoal. In a November 1983 poisoning—not reported in the series—Dr Larimore Cummins, a Santa Cruz, California, gastroenterologist, cannulated the common bile duct of a patient who survived *Amanita phalloides* poisoning. Where available, this procedure should be considered in severe poisonings as bile-laden amatoxin is totally diverted.

One mushroom cap from the collection eaten by patients 9 through 22 was in fact available at Brookside Hospital (San Pablo, California) and was identified as *Amanita phalloides* by one of us (P.V.), who also found strongly positive findings on a Meixner test.

Finally, there is now one paper available[2] on 205 consecutive European poisonings, where the use of intravenously given penicillin-G sodium resulted in a statistically significant decline in mortality. This study by Floersheim and coworkers is the largest series to date, and carefully analyzed by multiple regression. Previously, sufficient numbers of patients to statistically evaluate have been lacking in all published series. Thioctic acid appeared to be associated with an excess mortality, but one cannot rule out adverse selection. The intravenous administration of 40 million units a day of penicillin, therefore, is an option that may be considered.

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Manipulative Therapy for Low Back Pain

TO THE EDITOR: It would seem that the sheer magnitude of the suffering and cost of low back pain to our society would mandate that allopathic and osteopathic communities would finally unite on the issue of manipulative therapy.

To that end, let us share some observations that may apply and that we hope may encourage further dialogue.

Fifteen osteopathic medical schools are teaching subjective and objective methods for diagnosing spinal malfunctions leading to pain and disability. Additionally, their students are being taught the osteopathic principles involved in specific treatment. From there, it is hoped that they are trained in the skills to treat "hands on" for the dysfunction.

Manipulative therapy, being noninvasive, has a low morbidity risk. Outcomes, though occasionally dramatic, usually are consistent with "dosage" and patient cooperation.[1] As in any treatment modality, specificity of diagnosis contributes greatly to effectiveness. Recent manipulative research protocols[2] have standardized treatment, and outcomes are consistent and largely predictable. Postgraduate courses in osteopathic principles and practice are available at virtually all osteopathic medical schools for physicians interested in "hands on" experience.

Manipulative therapy adds another modality to the armamentarium of physicians using drugs, surgical treatment and other physical modalities—quite frequently a highly effective modality, indeed.

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Applying Information Technology to Clinical Medicine

TO THE EDITOR: The fascinating case of glucagonoma reported by Bolt and co-workers in the June 1986 issue[1] presents the tragic story of a man tormented by symptoms for more than a decade until an astute physician equated "sore tongue," "chronic indigestion" and "variable, red rash" with the possibility of an islet cell tumor. The patient underwent extensive evaluation at a university center documenting the presence of a glucagonoma. Ironically, the man subsequently died of complications of treatment.

The authors point out that the 12-year delay in diagnosis is typical of illness due to islet cell tumors. Surprisingly, they blame "the recent emphasis on cost effectiveness" as a "factor inhibiting early diagnosis."

The patient had been seen by numerous physicians, including appropriate subspecialists, for more than 12 years before anyone knew what was wrong with him. I seriously doubt that glucagon levels were not obtained for reasons of cost containment. More likely, the physicians did not think seriously about the possibility of glucagonoma. Or, if they did, they erroneously discounted the idea because they were unaware that more than 10% of patients with these tumors do not present "classic" features described in the medical literature.

The cost of this poor man's illness included 12 years of unmitigated morbidity, plus the cost of numerous useless investigations including multiple glucose tolerance tests, multiple skin biopsies, radiographic evaluation of the entire gastrointestinal tract and gallbladder, endoscopic evaluation of the stomach, small bowel and sigmoid colon, abdominal ultrasonograms and routine blood tests. Even after the diagnosis had been suspected and chemically confirmed by a glucagon level of 2,400 pg per ml, the man underwent additional tests including computer-assisted tomography of the head and abdomen with and without contrast; measurement of serum levels of amino acids, gastrin, insulin, vasoactive intestinal peptide, pancreatic polypeptide, cortisol, thyroxine, free thy-

roxine index, electrolytes, calcium and phosphorus; measurement of triiodothyronine uptake, and another glucose tolerance test. There is no comment on the cost effectiveness of these studies, nor who paid for them. There is no mention of anatomic or chemical assessments of the hepatobiliary system which subsequently was involved in the patient's death. Clearly, testing per se was not wanting in this case.

The delay in diagnosis in this patient resulted from two very common deficiencies in modern medicine: the failure of physicians to equate an illness with a recognized but rare condition and the failure of described "disease entities" to accurately reflect important and accessible details of observed illness. For 12 years, numerous physicians failed to equate the patient's case with a possibility of an islet cell tumor, whereas classic descriptions of islet cell tumors failed to include almost all the major descriptors of the patient's illness.

Despite all the costly investigative activity before and after the patient's diagnosis and the publication of an excellent case report, nothing has been done to address either of these problems.

The authors' admonition that "clinicians should be more alert to the forme fruste manifestations of these syndromes" does not solve the basic problem arising from the limited number of neurons in the human brain. While rare doctors exercise truly awesome memory capacities, the common lot of less gifted physicians currently has responsibility for many people's medical welfare. Eventually, as the number of important details in clinical medicine multiplies, even the best and the brightest minds will be overwhelmed. The solution is not better, brighter minds in medicine, nor more liberal use of exotic tests, nor further subspecialization; the only solution exists in the intelligent application of information technology to empower the otherwise-too-limited, unaided human mind.

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Treatments for Restless Legs Syndrome

TO THE EDITOR: It was with considerable interest that I read Drs Bernick and Stern's recent article on "Restless Legs Syndrome."[1] As a sufferer from this unlucky condition for many years, particularly in the late teenage years through my 20s and into my 30s, I frequently had considerable difficulty sitting down to read at night. On many occasions I read standing up and even occasionally doing toe stands to alleviate the "jitters." The problem is particularly bad when one wants to read. I seem to have inherited this condition from my mother, who called it the "jitters," who seemed also to have it at the same time of day, generally evening, with similar discomforts.

Nothing was successful in my treatment; I cannot even recall all the therapies tried over the years. Luckily I came to Stanford University in the late 1960s to finish my residency in plastic surgery. It did not take very long, living in California, to find out that a single glass of red wine at night seemed to totally alleviate my problems. Once a sufficient concentration of whatever-it-is is reached, one or two glasses a week suffices. When I passed this on to my mother, she was more than happy to try the treatment and was also totally relieved of the problem for the remaining ten years of her life. I do not know whether Salvatore Lucia, MD, late Professor of Medicine at the University of California, San Francisco, ever discussed this in any of his many books on the uses of wine in medicine, but it certainly should have been included. As the authors of this article are strongly recommending against jumping into those medications prescribed in the past, perhaps this is a treatment that others would like to try first.

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TO THE EDITOR: My wife had a bad case of restless leg syndrome.[1] It disappeared when she quit taking calcium with magnesium supplements. She now takes calcium *only* and has no problems.

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TO THE EDITOR: The August article by Bernick and Stern on the restless legs syndrome discusses in detail the clinical features, etiology and treatment of this distressing entity.[1]

My medical specialty is dermatology and my interest in the restless legs syndrome was the result of two factors: one of my office employees had suffered from this condition for several years and my wife and I were both victims of nocturnal leg cramps. I was treating a young man for a skin problem with vitamin E in large doses, which relieved his dermatosis. As I reported in this journal in 1969, he was particularly grateful because this treatment also relieved him from severe cramps of various muscles that followed heavy exercise.[2]

In view of the striking results in the relief of exercise cramps with vitamin E therapy, I started my office nurse on the same treatment with prompt relief from her restless legs syndrome[3] and prescribed vitamin E for my wife and myself with prompt relief from our nocturnal leg cramps. The conditions remained under control with continued smaller maintenance doses of vitamin E, which I found were equally effective in controlling rectal cramps and intermittent claudication.

I am currently treating with vitamin E a 39-year-old man who has suffered from the restless legs syndrome for the past 28 years every day or night, occasionally three or four times in 24 hours. I prescribed vitamin E in the form of *d*-α-tocopheryl acetate, 400 IU to be taken three times a day before meals. At his most recent visit, nine months after his first visit, he stated that he had had only nine attacks of restless legs syndrome during the preceding two months, lasting only five to ten minutes.